

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Straight Fork

Water Body Segment at a Glance:

County: Morgan
Nearby Cities: Versailles
Length of impairment: 1.1 miles
Pollutant: Volatile Suspended Solids (VSS)
Source: Versailles Wastewater Treatment Plant (WWTP)



State map showing location of watershed

TMDL Priority Ranking: Permit in lieu of a TMDL approved 2006

Description of the Problem

Beneficial uses of Straight Fork

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Human Health Protection (Fish Consumption)

Use that is impaired

- Protection of Warm Water Aquatic Life

Standards that apply

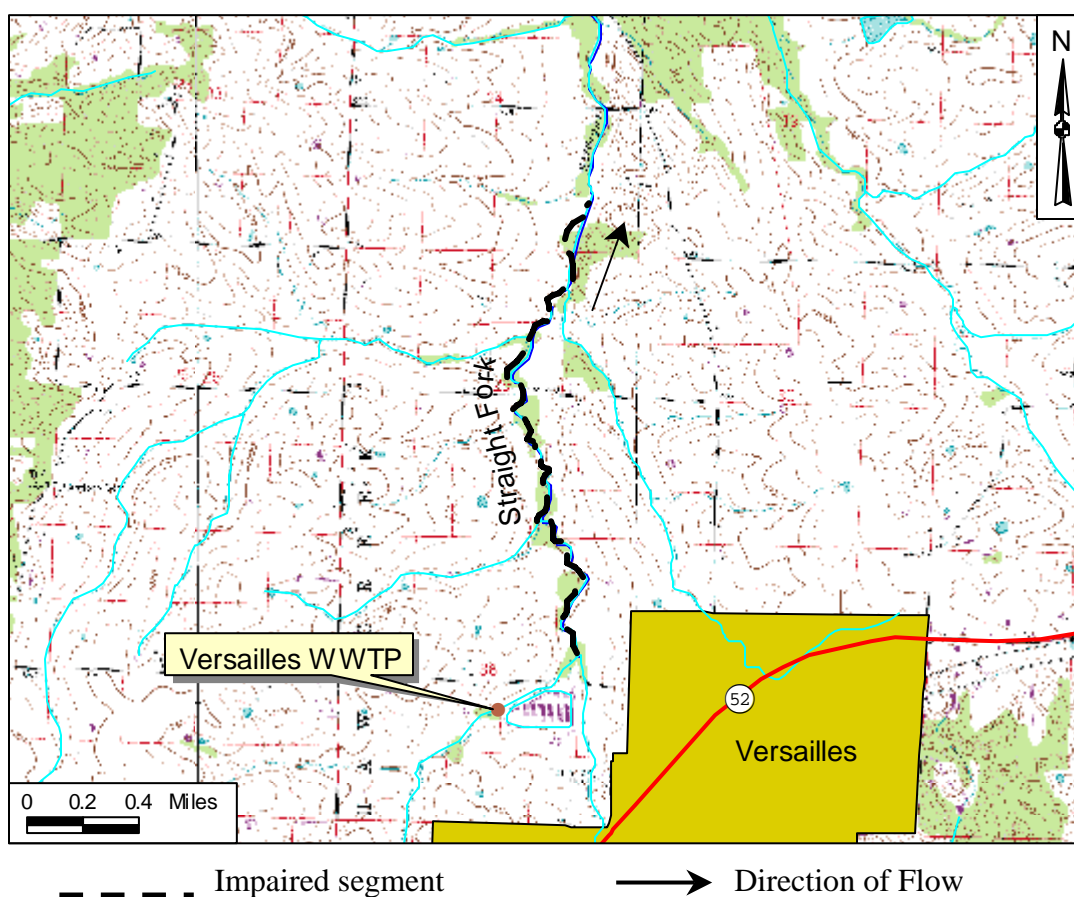
- The impairment is based on exceedence of the general criteria contained in Missouri's Water Quality Standards, 10 CSR 20-7.031 (3)(A) and (C). These criteria state:
 - Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
 - Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.

Background information

Any waterbody that was listed for Non-filterable Residue (NFR) in 1998, such as Straight Fork, is now being listed for Volatile Suspended Solids (VSS). This change was made to better distinguish between organic solids coming from wastewater treatment plants (VSS) and mineral solids (soil or mineral particles) coming from soil erosion or erosion of mine waste materials or stockpiles (Non-Volatile Suspended Solids or NVSS).

Straight Fork shows excessive suspended algae due to discharges from the stormwater basin of the Versailles Wastewater Treatment Plant (WWTP). VSS refers to particles that are suspended in water, like the algae in Straight Fork, or those that settle out, like sewage sludge. Suspended algae block sunlight and reduce dissolved oxygen in the water. Many aquatic organisms require high levels of oxygen to survive. Excess algae also cause unsightly color in the water and increased turbidity. Like all wastewater discharges in Missouri, the Versailles WWTP is required to meet specific limits contained in a discharge permit issued by the Missouri Department of Natural Resources. By making changes to the conditions of the discharge permit, the quality of the plant discharge will be improved and result in improvements in Straight Fork. The department conducted a water quality study of Straight Fork in 2003 and 2004 to help determine just what those limits should be. Their permit was reissued with new permit limits and the permit was submitted to the Environmental Protection Agency (EPA) as a permit in lieu (PIL) of a TMDL. The EPA approved this PIL December 11, 2006.

Straight Fork in Morgan County, Missouri, Showing Impaired Segment and the Versailles WWTP



For more information call or write:

Missouri Department of Natural Resources, Water Protection Program
P.O. Box 176, Jefferson City, MO 65102-0176
1-800-361-4827 or (573) 751-1300 office or (573) 522-9920 fax
Program Home Page: www.dnr.mo.gov/env/wpp/index.html